State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

March 11, 1999

Lon Thomas
American Stone, Incorporated
4040 South 300 West
Salt Lake City, Utah 84107

Re: Initial Review of Notice of Intention to Commence Large Mining Operations, American Stone, Inc., Peoa Quarry, M/043/012, Summit County, Utah

Dear Mr. Thomas:

The Division has completed a review of your draft Notice of Intention to Commence Large Mining Operations (Notice) for the Peoa Quarry, located in Summit County, Utah, which was received October 27, 1998. After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion.

The Division will suspend further review of the Peoa Quarry Notice until your response to this letter is received. If you have any questions in this regard please contact me, Tony Gallegos, Lynn Kunzler, or Tom Munson of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Review
cc: Bons Obiadi, Summit County w/attachment
m043012.rvw

REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

American Stone, Inc.
Peoa Quarry Mine

M/043/012

R647-4-105 - Maps, Drawings & Photographs

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

The cross section in Map 5 includes dimensions; however, this cross section is not drawn to scale. Please provide a scaled version of this same cross section and provide an additional scaled cross section running east-west through the highwall which is located to the north of the pond. Please show the location of these cross sections on the surface facilities map. Please indicate whether these cross sections represent the profile during active operations or after final reclamation. (AAG)

R647-4-106 - Operation Plan

106.3 Estimated acreage disturbed, reclaimed, annually

The Notice identifies a total of 13 acres of disturbance and states that reclamation will progress with mining to maintain the disturbed area at any one time within this 13 acres. Please show on a map the approximate sequence of mining and reclamation that will be followed to maintain the 13 acres or less of unreclaimed disturbance. The description of the mining and reclamation sequence should cover a minimum period of five years into the future. (LK & AAG)

Please note, Division measurements of Map 4 give a disturbed acreage for the staging and palletized stone area of 7.15 acres (excluding the road). Division measurements of Map 4 give the figure for the proposed area to be regraded, topsoiled, fertilized and seeded as 13.8 acres. This figure includes the pond and two highwall areas. The surface disturbance for the road was estimated using the scaled length from Map 4 and an assumed 40 ft width. The total road disturbance is estimated as 2.86 acres. The total surface disturbance for the entire project including roads, was measured from Map 4 as approximately 23.8 acres. (AAG)

106.4 Nature of materials mined, waste and estimated tonnages

Please describe the typical fragment size(s) of materials to be placed in the waste dumps. Please provide an estimate of the annual or total life of mine volume or tonnage of material to be placed in the waste dumps. (AAG)

106.5 Existing soil types, location, amount

The Notice indicates that the soils information is still being evaluated and will be turned in when the evaluation is completed. The soil information must be provided and evaluated before the Division can approve the Notice. (LK)

106.6 Plan for protecting & redepositing soils

A variance is requested for protecting and redepositing existing soils. Justification provided states that "existing soils are too thin and rocky to recover. There is not enough usable soil below the tailings pile to be of any help in reclamation. Most of the area to be disturbed does not have good soil on it; however, care will be taken to look for and save any appreciable amount of good soil should some be encountered."

Even an inch or two of soil can make a significant difference in achieving reclamation success. Without soils data, the Division cannot affirm claims that soil is not available or is of poor quality as to render it useless for revegetation efforts. The Division will not approve the requested variance for protecting and redepositing soils until the soils data is submitted and a possible site visit made to verify soil conditions. (LK)

106.7 Existing vegetation - species and amount

The vegetation information supplied is incomplete. There is no discussion of methodology used for sampling, including quadrat size, transect length or the location of sample transects. The figures in the vegetation summary of the Notice - under III. Rule R647-4-106 - Operation Plan, (106.7) do not appear to have any basis when compared to the Vegetation Data sheets you attached. Please provide a complete description of the vegetation study that was conducted and correct the Notice by providing an accurate summary of the vegetation that is supported by the data collected.

As a final note, the percent vegetation cover reported (19.5%) appears to be very low for the area. From photos of the area and recollection of vegetation conditions from past site inspections, vegetation cover would be expected to be in a range from 45-60% ground cover. Please re-review the data collected and analysis conducted to make sure errors in calculating the percent vegetation cover were not made. (LK)

106.8 Depth to groundwater, extent of overburden, geology

Apparently there is very little groundwater in the area, but you can dig a trench and it fills with some shallow groundwater flow. It, therefore, becomes essential that all hazardous wastes, oils and hydraulic fluids be confined within adequate secondary containment structures as suggested. Also a plan to clean up any oil spills should be given to the workers and a copy included in the mining plan. Please provide this information. (TM)

106.9 Location & size of ore, waste, tailings, ponds

Under this heading the submission describes the waste dump as involving 7 acres. Under the heading of R647-4-110.2 the submission describes the waste dump as involving 10 acres. Please explain these conflicting figures.

As clarification, this project does not propose an onsite processing facility which produces tailings. The "tailings" referenced in the submission have been interpreted by the Division to refer to reject materials after the excavated stone has been split and sorted. If this interpretation is incorrect please notify us. (AAG)

R647-4-107 - Operation Practices

107.1 Public safety & welfare

Please describe the measures to be taken to prevent public access to the mine site, mine highwalls, and other safety hazards during active operations, or explain why these measures are unnecessary. Such safety measures may include locked gates, fencing, warning signs, safety berms or trenches, etc. (AAG)

107.1.12 Disposal of trash, scrap, debris

Section 110.4 of the submission describes the disposal of trash as part of the reclamation plan. Please describe how trash, scrap, and debris generated during active operations will be handled. (AAG)

107.2 Drainages to minimize damage

The operator has described what he intends to do to reclaim channels, but has failed to describe what he intends to do during operations to avoid or minimize environmental damage to the drainages adjacent to or existing within the property. The ephemeral drainages as shown on the maps are impacted by the mining operation and the larger drainage to the East will to be blocked by a pad created by waste rock. How will the drainage be rerouted or stabilized both during operations and following reclamation? Please mark on the map what reaches of channel will be impacted by the operation. (TM)

107.3 Erosion control & sediment control

The operator has not throughly addressed the impact of runoff from the property onto other adjacent lands. Pads built in drainages etc., storage areas for waste rock and spring areas should be protected from disturbed runoff. Please provide a storm water protection plan. (TM)

107.5 Suitable soils removed & stored

Refer to comments made under R647-4-106.5 and -106.6. The Division cannot evaluate compliance with these sections until the soils data is submitted.

The reclamation section of the Notice (R647-4-110.5) indicates that topsoil will be obtained from a nearby, onsite borrow area. This borrow area needs to be shown on the reclamation map. Plans to reclaim the borrow area also need to be provided. An analysis of the soil within the borrow area needs to be provided. This analysis needs to include the volume of topsoil available for borrow, the

texture of the soil material, ph, Electrical conductivity (Ec), Cation exchange capacity (CEC), % Organic matter, Nitrate Nitrogen, Total N, Phosphorus (as P_2O_5) and Potassium (as K_2O). It is suggested that a minimum of three samples be analyzed to characterize the borrow area. Each sample would include soil materials taken at 6-inch intervals to a depth of what would be used for reclamation. (LK)

107.6 Concurrent reclamation

Refer to comments under R647-4-106.3 Estimated acreage disturbed and reclaimed annually. A map showing the mining and reclamation sequence is needed to evaluate the amount of planned disturbance at any one time. (LK)

R647-4-109 - Impact Assessment

The opening statement in the Notice under this section states that "The area in which this operation is located is a remote mountain slope in an area where there are no people living for 5 miles. The closest small community is 5 miles away. The current mining operations encompass approximately 13 total acres on a mostly bare rocky mountain slope." These statements need to be corrected. The town of Peoa is about 2 miles away and there are houses within a mile of the operation. As indicated previously, the Division measured 23.8 acres that are planned for this operation. From photos of the area, and the amount of vegetation reported, this could hardly be considered a bare rocky mountain slope. (LK)

109.1 Impacts to surface & groundwater systems

The impacts to surface water are not adequately described or mitigated. Some sort of mitigation is required, given that the normal surface water drainage channel is blocked by a pad expansion shown on the included maps. Whether it is a rerouting of the drainage or installation of an adequately sized culvert, some sort of plan needs to be described and approved. Please provide the necessary information to describe the mitigation associated with this pad expansion. (TM)

109.3 Impacts on existing soils resources

Refer to comments made under R647-4-106.5 and -106.6. The Division cannot evaluate compliance with this section until the soils data is submitted. (LK)

109.4 Slope stability, erosion control, air quality, safety

Section R647-4-107 Operation Practices of the submission states the "tailings" (reject materials) will be crushed and made into a salable product concurrent with operating the mine. Under section R647-4-109 - Impact Statement, the submission states no crushing or screening is entailed in this operation at this time. Correspondence received January 5, 1999 from Don Sargent of DBS Consulting indicates a rock crusher is being formally amended into this plan and an air quality permit application will be obtained. Please add a detailed description of the crushing circuit into the

description of operations under section R647-4-106.2. Please show the proposed location of the crushing circuit on a revised surface facilities map.

Please provide us with a copy of the approval letter from the Division of Air Quality regarding the air quality permit. (AAG)

Section R647-109 Impact Statement of the submission states the highwall will be at an angle of "75%." The section of the submission addressing additional maps under item "a." describes an area on Map #4 which will be at approximately 70 degrees at mine closure. Later in this section under item "d." the submission states there will be no highwalls steeper than 45 degrees or slopes steeper than 3H:1V. Please explain these conflicting descriptions regarding the highwalls. Please describe the highwall configuration during active operations and after final reclamation. This highwall information is needed before a determination regarding stability or safety impacts can be made. (AAG)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Under this section the submission describes using a D8 dozer to recontour the highwalls to 45% (sic) and recontour the tailings pile to an acceptable angle. As clarification, the Division assumes the highwalls will be recontoured to an angle of 45 degrees rather than 45 percent. Please confirm this interpretation. The submission contains conflicting highwall descriptions which make it difficult to determine if the proposed highwall recontouring is feasible. Please see the comments under section R647-4-109.4 of this review regarding the highwall description. (AAG)

Please describe or clarify the reclamation treatments proposed for the dump top and dump slopes. The submission describes borrowing soil from a nearby area for use in reclamation and placing an approximate depth of six inches. Please clarify whether this depth of soil will be placed over the entire disturbed area to be reclaimed or limited to specific areas such as the excavation floor, dump top, etc. Please provide acreages for the areas to receive this borrowed topsoil placement. (AAG)

110.3 Description of facilities to be left (post mining use)

Please describe how the scales and scale house are needed for the post mining land use of grazing and wildlife habitat. Otherwise, provide plans for the removal of the facilities and the reclamation of the affected area. (LK)

R647-4-111 - Reclamation Practices

111.1 Public safety & welfare

Please explain why safety berms, fences, warning signs, or other measures are not needed to ensure public safety in the highwall area after final reclamation, or revise the reclamation plan to include the appropriate safety measures. (AAG)

111.6 All slopes regraded to stable configuration

Section 105.3 - Additional Maps, of the submission states there are no slopes which are proposed to remain at angles steeper than 3 horizontal to 1 vertical. The reclamation plan section of this submission does not specifically describe the waste dump slopes after final reclamation. Please confirm that all waste dump slopes will be graded to an angle of 3H:1V or less at final reclamation. (AAG)

111.9 Dams & impoundments left self draining & stable

There is a proposal to leave an impoundment where the pit once was. This impoundment would be considered acceptable if it contains an adequate ramp into it and a spillway in case it overflows. It needs to be left self draining and stable. (TM)

111.12 Topsoil redistribution

See comments under R647-4-107.5.

R647-4-112 - Variance

A variance was requested from Rule R647-4-106.6 - Plan for protecting & redepositing soils. The operator does not wish to salvage topsoil at this operation. The Division cannot approve this variance at this time. Please refer to comments under R647-4-106.6 - Plan for protecting & redepositing soils. (LK)

A variance was requested from Rule R647-4-111.8 - Roads and Pads Reclaimed. The operator does not wish to reclaim any of the roads associated with this operation. The application states that they have a post mining land use value to access the property. Map 4 shows the main access road going through the disturbed area and accessing lands to the north. No other roads are shown on the map. The Division will grant a variance for the main access road with the following condition. The road must be partially reclaimed back to the pre-existing road conditions, that being an approximate 12-foot wide unpaved (unimproved) road. (LK)

R647-4-113 - Surety

The additional information requested in this review is needed before an accurate reclamation estimate can be arrived at by the Division. Below are comments on the reclamation cost estimate included in this submission. The additional information requested in this review may cancel some reclamation estimate comments or generate new estimate comments. (AAG)

The reclamation estimate includes a fertilizer application, yet the text of the submission states fertilizer will not be used unless necessary. The Division will need the soils information requested under section R647-4-106.5 and 106.6 to determine if fertilizing is necessary. The line item for fertilizing may need to be adjusted depending on the additional information requested in this review. (AAG)

Please provide the measurements used to calculate the volume of 2,300 CY as the volume of material to be moved in regrading the waste dumps. (AAG)

The reclamation plan describes recontouring the highwalls to a slope of 45 degrees and recontouring the tailings pile for $5,200. Please insert this cost into the estimate or explain where this cost was included. This cost may need to be adjusted depending on the additional information requested under section R647-4-109.4. (AAG)

Please describe the acreage to be disturbed at the borrow area and estimate the volume of soil to be removed. Please show the borrow area on the surface facilities map. Please revise the reclamation estimate to include regrading and reseeding of the acreage affected at the borrow site. (AAG)

Please insert the $1,800 described in the reclamation estimate for excavating and hauling topsoil as a line item for topsoil replacement in the reclamation estimate or explain where this cost was included. This cost may need to be adjusted depending on the location of the borrow site. (AAG)

The estimate needs to be adjusted for the Division's variance decision regarding reclamation of the access road down to a single lane width of approximately 12 feet from a 40 ft width. This means approximately 2.0 acres of access road will need to be reclaimed by ripping or regrading, and seeding. This acreage was calculated using a road length of 3,120 feet and a width of 28 feet (40 feet - 12 feet). Please adjust the reclamation estimate to include ripping and seeding of 2.0 acres of access road. (AAG)

Please explain why the estimate does not need to include removal of truck scales, fuel tanks, or the trailer, or revise the estimate to include costs for removal of these features. (AAG)

Please revise the acreage under the line item of broadcast seeding to include the staging and palletized stone area of 7.15 acres, the quarry -pond-highwall area of 13.8 acres, and the portion of access road to be reclaimed of 2.0 acres. This gives a reseeding area of approximately 22.95 acres without including the borrow area. (AAG)

Please provide information or calculations to support the inclusion of two days of supervision for this reclamation project. (AAG)